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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	HOLMQVIST 1
First Inventor or Application Identifier	Ryan S. Holmqvist
Title	SYSTEM AND METHOD FOR PROVIDING ANCILLARY PAGE INFORMATION
Express Mail Label No.	EL176030549US

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
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Washington, DC 20231

1. [X] *** Fee Transmittal Form** *(e.g., PTO/SB/17)*
   (Submit an original and a duplicate for fee processing)

2. [X] Specification   [*Total Pages* 26]
   (preferred arrangement set forth below)
   - Descriptive title of the Invention
   - Cross References to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to Microfiche Appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure

3. [X] Drawing(s) *(35 U.S.C. 113)*   [*Total Sheets* 2]

4. Oath or Declaration   [*Total Pages* 5]
   a. [X] Newly executed (original or copy)
   b. [ ] Copy from a prior application (37 C.F.R. § 1.63(d))
      (for continuation/divisional with Box 16 completed)
      i. [ ] DELETION OF INVENTOR(S)
         Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

* NOTE FOR ITEMS 1 & 13: *IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).*

5. [ ] Microfiche Computer Program *(Appendix)*

6. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. [ ] Computer Readable Copy
   b. [ ] Paper Copy (identical to computer copy)
   c. [ ] Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. [X] Assignment Papers (cover sheet & document(s))

8. [ ] 37 C.F.R.§3.73(b) Statement *(when there is an assignee)*   [ ] Power of Attorney

9. [ ] English Translation Document *(if applicable)*

10. [ ] Information Disclosure Statement (IDS)/PTO-1449   [ ] Copies of IDS Citations

11. [ ] Preliminary Amendment

12. [X] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*

13. [ ] * Small Entity Statement(s) (PTO/SB/09-12)   [ ] Statement filed in prior application, Status still proper and desired

14. [ ] Certified Copy of Priority Document(s) *(if foreign priority is claimed)*

15. [ ] Other: ....
....
....

16. **If a CONTINUING APPLICATION,** *check appropriate box, and supply the requisite information below and in a preliminary amendment:*
   [ ] Continuation [ ] Divisional [ ] Continuation-in-part (CIP)   of prior application No: _____

   Prior application information: Examiner _____   Group / Art Unit: _____
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SYSTEM AND METHOD FOR PROVIDING ANCILLARY PAGE INFORMATION

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SYSTEM AND METHOD FOR PROVIDING ANCILLARY PAGE INFORMATION

TECHNICAL FIELD OF THE INVENTION

The present invention is directed, in general, to a paging

system and, more specifically, to providing ancillary page

5 information for use in a pager.

BACKGROUND OF THE INVENTION

The speed at which today's society expects and even demands

information concerning identity of the sender is growing at an

10 unprecedented rate. Often, the success of a particular business

arrangement or, in some cases, the success of the business itself

depends upon the ability of several parties to know who they are

communicating with and their location. This need is also growing

15 rapidly in many arenas outside that of business as well. The

parties may be mobile and unable to transfer the desired

information at a particular location due to security problems or

other reasons. A sending party, whose location is not precisely

known, may need to indicate to a receiving party that another time

20 and place is more appropriate for a communication to occur. Both

the sending and receiving parties may require some type of

verification of the other for security reasons.

Pagers are one of the most popular ways that a sending party and a receiving party may initiate a communication. Pagers are inexpensive to own and operate and may be left operational for extended periods of time, making them essentially universally available. Many pagers in use today only display a call-back number of a sending party. If the receiving party does not readily recognize the call-back number, the receiving party may not respond either in a timely manner or at all. There are many situations where a sending party may be forced to use a call-back number that is different than one normally used, such as accidents, emergencies and while traveling. These situations, if occurring at other than expected times, may not receive the priority from the receiving party that was expected or hoped for by the sending party.

Often, by the time that the receiving party responds, the call-back number is no longer valid for the sending party and the communication is lost or delayed. The ability of the receiving party to quickly determine the nature and response time appropriate to a call-back number may be critical to the success of both business and other communications. Therefore, what is needed in the art is a way to effectively and efficiently provide ancillary information to a pager.

SUMMARY OF THE INVENTION

To address the above-discussed deficiencies of the prior art, the present invention provides a system for, and a method of, providing ancillary page information for use in a paging network. In one embodiment, the system includes: (1) an ancillary information collector, associated with a page call-in center of the paging network, that derives party identification information ancillary to a page request received by the page call-in center and (2) an ancillary information transmitter, associated with the page call-in center, that automatically transmits at least some of the party identification information to a pager associated with a paged party.

The present invention therefore introduces the broad concept of providing the recipient of a page with additional information that may be used to determine how the recipient of the page will respond. The additional information may provide caller ID information that has been modified to accommodate a special circumstance related to a caller. This information is made available to the page recipient in a form that allows an appropriate and timely response. The present invention is also advantageous to the caller in that a call-back phone number may be communicated automatically. Alternately the call-back number may

be a special one-time event or identified from a priority list of call-back numbers.

In one embodiment of the present invention, the ancillary information collector derives the party identification information from a public telephone network associated with a paging party. Of course, the telephone network may also be a private network or a combination network consisting of public and private segments.

In one embodiment of the present invention, the ancillary information collector prompts a paging party for at least some of the party identification information. The paging party may respond to the ancillary information collector in a variety of ways and provide more information than has been requested or that may be accommodated by a particular pager associated with a paged party.

In one embodiment of the present invention, the ancillary information collector recognizes a voice of a paging party to receive at least some of the party identification information. The use of voice recognition allows positive identification of the paging party. Additionally, speech recognition may be advantageously employed to facilitate an interaction between the paged party and the ancillary information collector.

In one embodiment of the present invention, the party identification information is selected from the group consisting of: (1) caller identification information, (2) name information and

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(3) location information. Of course, many other information groups may be used for selection to accommodate both general and special situations for a paging party and to meet the requirements of a paged party.

5   In one embodiment of the present invention, the ancillary information collector derives the party identification information from a database associated with the page call-in center. The database may contain a wide spectrum of paging party information from which to choose and select. Conversely, the database may

10   contain only a minimal amount of ancillary information such as a paging party name.

In one embodiment of the present invention, the pager is selected from the group consisting of: (1) an alphanumeric pager, (2) personal digital assistant (PDA) and (3) a cell phone. Of

15   course, other appropriate existing or future-developed devices may also be used as a pager.

The foregoing has outlined, rather broadly, preferred and alternative features of the present invention so that those skilled in the art may better understand the detailed description of the

20   invention that follows. Additional features of the invention will be described hereinafter that form the subject of the claims of the invention. Those skilled in the art should appreciate that they can readily use the disclosed conception and specific embodiment as

a basis for designing or modifying other structures for carrying out the same purposes of the present invention. Those skilled in the art should also realize that such equivalent constructions do not depart from the spirit and scope of the invention in its

5   broadest form.

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present invention, reference is now made to the following descriptions taken in conjunction with the accompanying drawings, in which:

FIGURE 1 illustrates a system diagram showing an embodiment of an infrastructure of a paging network for providing information ancillary to a page request; and

FIGURE 2 illustrates a flow diagram showing an embodiment of a method employed by the paging network of FIGURE 1.

DETAILED DESCRIPTION

Referring initially to FIGURE 1, illustrated is a system diagram showing an embodiment of an infrastructure of a paging network for providing information ancillary to a page request, generally designated 100. The paging network 100 includes a paging party 104 associated with a source phone 105, a public telephone network 110, a page call-in center 115, a pager network 130 and a pager 135 associated with a paged party 136. The pager 135 may include an alphanumeric pager, a personal digital assistant (PDA), a cell phone or another appropriate device that may be used to receive a page. Other embodiments of the present invention may include any number of paging parties 104, source phones 105 and pagers 135 associated with pageable parties 136.

In the illustrated embodiment, the paging party 104, using the source phone 105, sends page requests to the page call-in center 115 via the public telephone network 110. Other embodiments of the present invention may use networks that contain private network segments or a combination of public and private networks. The page call-in center 115 also receives ancillary information associated with each page request.

The ancillary information received at the page call-in center 115 may take the form of caller-ID information. Alternately, the

paging party 104 may use the source phone 105 to provide ancillary information. The paging party 104 may provide substitute or supplementary ancillary information via the touch pad of the source phone 105 or use other types of electronic devices that can communication through the public telephone network 110. Additionally, the paging network 100 may obtain the ancillary information from the paging party 104 through voice or speech recognition.

Associated with the page call-in center 115 is an ancillary information collector ("AIC") 120. The AIC 120 includes a caller-ID decoder 121, a touch-tone decoder 122 (also called a DTFM decoder) and a page database 123. Additionally in this embodiment, the AIC 120 possesses the capabilities of voice or speech synthesis and both voice and speech recognition.

The AIC 120 processes the ancillary information received by the page call-in center 115 in a variety of ways. If caller-ID information is provided, the AIC 120 employs the caller-ID decoder 121 to determine a name associated with the telephone number of the source phone 105. In this embodiment, the AIC 120 responds, using synthesized speech, to verify the name of the paging party 104. The paging party 104 may then respond either by using the touch pad associated with the source phone 105 or by speech.

If the response is affirmative, the paging party 104 may use

a spoken word to confirm. If the paging party 104 wishes to use another name, that name may be entered via the touch pad either by spelling the name of the paging party 104 or by entering a predetermined code that instructs the AIC 120 to perform another

5   processing function.

In the illustrated embodiment, the paging party 104 may use the touch pad of the source phone 105 for the number zero (0), the number one (1), the symbol star (*) or the symbol pound (#) to indicate that a special code is to be entered. This special code

10   is recognized by the AIC 120 using the touch-tone decoder 122 and the page database 123. The touch-tone decoder 122 decodes the touch-tone sequence that is entered by the paging party 104 using the touch pads of the source phone 105. Each of the numbers 0,1 or the symbols *, # may indicate classes of special instructions. Of

15   course, combinations of these numbers and symbols may be used to define additional classes of instructions.

A class of special instructions may include a collection of names to be used to identify the paging party 104 to the AIC 120. For example, the paging party 104 may use the touch pad sequence 0

20   and then 2 to select their name or other pertinent ancillary information from the page database 123 to be sent to the paged party 136. Alternately, the caller may select another class of special instructions that would indicate to the paged party 136

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that a specific time would be appropriate to contact the paging party 104. A sequence of special instructions may also be used, as appropriate to the capability of the pager 135, to display a number or even a sequence of predetermined messages. A sequence of interchanges may occur between the paging party 104 and the page call-in center 115 to verify the ancillary information or to prompt the paging party 104. Of course, one skilled in the art will understand that there are a broad range of possible uses for the classes of special instructions.

In one embodiment, the paging party 104 may also use voice to communicate with the page call-in center 115. The AIC 120 recognizes the voice of the paging party 104 to receive at least some of the party identification information. Voice recognition may be used to verify the identify of the paging party 104 and speech recognition may then be used to determine a spoken special instruction. Alternately, the paging party 104 may use voice and speech to indicate the ancillary information without reference to special instructions.

The AIC 120 may also use the page database 123 to provide a spectrum of paging party identification information. The paging party information may typically include at least caller-ID information, the paging party's name and the paging party's location. The page database 123 may also include alternate

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telephone numbers or other information that may be displayed on the pager 135. In other embodiments, the page network 100 may use the page database 123 to select and send display information specific to a receiving device. The receiving device may include wireless phones with displays, personal data assistant ("PDA"), hand-held computers, and other devices capable of receiving information via the pager network 130.

The ancillary information transmitter ("AIT") 125 is associated with the AIC 120 and automatically transmits the page request to the pager 135 via the pager network 130. The pager network 130 may include radio transmissions, satellite transmissions, cellular transmission and any combination there of. The AIT 125 also transmits the ancillary information received and/or obtained by the AIC 120. In another embodiment, the AIT 125 may transmit a selected subset or subsets of the ancillary information to the pager 135. The AIT 125 may also use the page database 123 to determine the capability of the pager 135 to receive and store the page request and ancillary information. The information that defines the capability of the pager 135 may be updated periodically as the paged party 136 modifies a capability of the pager 135.

Additionally, the paged party 136 may elect to carry more than one pager at a time. In this case, the AIC 120, working in concert

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with the AIT 125, may select an appropriate one of the pagers, represented by the pager 135 in FIGURE 1, to receive the page and/or the ancillary information. This level of sophistication may require that the page call-in center 115 be able to control all of the pagers involved and know which pagers are currently in active use by the paged party 136. The paged party 136 must update the page call-in center 115 when a suite of active pagers changes. In another embodiment, the paging network 100 may poll or request information from the pagers associated with the paged party 136 to determine which are active and their associated capabilities.

Turning now to FIGURE 2, illustrated is a flow diagram showing an embodiment of a method 200 employed by the paging network 100 of FIGURE 1. The method 200 starts in a step 201 when a paging party desires to contact a paged party. A page is initiated in a step 205 with the paging party using a source phone to contact a page call-in center via a telephone network. The page call-in center responds to a first question Q1, in a step 210, to determine if there is a caller-ID associated with the source phone used by the paging party. If the answer to the first question Q1 is "yes", the page call-in center decodes the source phone number using a caller-ID decoder contained in an ancillary information collector and responds to the paging party with a second question Q2, in a step 215.

The second question Q2 of the step 215 queries the paging party to verify that the source phone number identified by the caller-ID decoder is the one to be sent to the paged party. The page call-in center uses synthesized voice to present the second question Q2 to the paging party. If the answer to the second question Q2 is "yes", the page call-in center then queries the paging party using synthesized voice with a third question Q3, in a step 220. The third question Q3, in the step 220, verifies with the paging party that the name associated with the caller-ID of the source phone number is to be sent to the paged party.

If the answer to the third question Q3 is "yes", the page call-in center employs an ancillary information transmitter to send the number and name associated with the caller-ID of the source phone to the paged party. This information is sent through a pager network to a pager associated with the paged party. The paging party responds using speech in this embodiment but may use the touch pads of the source phone at alternate times or in alternate embodiments. Once the information is sent to the paged party, the processing is stopped in a step 280.

If the answer to the third question Q3 in the step 220 is "no", the page call-in center uses synthesized voice to query the paging party for a special code or a telephone number to identify the paging party, in a step 230. Then in the step 230, the paging

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party supplies the desired telephone number using voice. In a step 235, the page call-in center recognizes the spoken telephone number and retrieves a paging party name associated with the telephone number from a page database contained in the ancillary information collector. The ancillary information collector may also use voice recognition techniques to verify that the paging party is indeed the person corresponding to the name in the page database, if a level of security or other reasons so merit.

In another embodiment, the page call-in center may use a touch-tone decoder to obtain all or part of the required information. Alternately, the caller may select another class of special instructions that would indicate to the paged party that a specific time would be appropriate to contact the paging party. A sequence of special instructions may also be used, as appropriate to the capability of the pager, to display a number or even a sequence of predetermined messages. A sequence of interchanges may occur between the paging party and the page call-in center to verify the ancillary information or to prompt the paging party. Of course, one skilled in the art will understand that there are a broad range of possible uses for the classes of special instructions.

Then in a step 240, the page call-in center sends the telephone number supplied by caller-ID and the paging party name

retrieved from the page database to the pager of the paged party. Once the information is sent to the paged party, the processing is stopped in the step 280.

If the answer to the first question Q1 in the step 210 is "no" indicating that there is no caller-ID available from the source phone, the method 200 continues in a step 245. Additionally, if the answer to the second question Q2 in the step 215 is "no" indicating that the paging party does not want to use the telephone number associated with caller-ID, the method 200 also continues in the step 245. In the step 245 using synthesized voice, the page call-in center requests that the paging party supply the telephone number that is to be sent to the paged party. The paging party responds by entering the telephone number using the touch pads of the source phone, in the step 245.

Then in a step 250, the ancillary information collector uses the touch-tone decoder to determine the telephone number entered by the paging party and searches the page database to obtain a name associated with the telephone number for the paging party. The page call-in center then responds using synthesized voice, in a fourth question Q4 in a step 250, verifying that the database name is the one desired for use by the paging party. If the answer to the fourth question Q4 is "yes", the ancillary information transmitter associated with the page call-in center sends the

entered number and database name to the pager associated with the paged party, in a step 260. Once the information is sent to the paged party, the processing is stopped in the step 280.

If the answer to the fourth question Q4 is "no", the page call-in center then requests that the paging party provide, using the touch pads of the source phone in this example, either a special code or another telephone number that may be used to retrieve a name to be associated with the paging party, in a step 265. Then in a step 270, the touch-tone message is again decoded and the appropriate paging party name is retrieved from the page database. The telephone number entered in the step 245 and the name retrieved in the step 270 are sent to the pager associated with the paged party. Once the information is sent to the paged party, the processing is stopped in the step 280. Of course, speech may also be used as an embodiment of the present invention dictates. Also, other embodiments of the present invention may have additional or fewer steps than described above.

In summary, the present invention introduces the broad concept of providing the paged party recipient of a page with additional information that may be used to determine how and when the paged party may respond. The additional information may provide caller ID information that has been modified to accommodate a special circumstance related to a paging party. This information is made

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available to the page recipient in a form that allows an appropriate and timely response. The present invention is also advantageous to the paging party in that a call-back phone number may be communicated automatically. Alternately the call-back number may be a special one-time event or identified from a priority list of call-back numbers.

Although the present invention has been described in detail, those skilled in the art should understand that they can make various changes, substitutions and alterations herein without departing from the spirit and scope of the invention in its broadest form.

WHAT IS CLAIMED IS:

1. For use in a paging network, a system for providing
ancillary page information, comprising:

an ancillary information collector, associated with a page
call-in center of said paging network, that derives party
identification information ancillary to a page request received by
said page call-in center; and

an ancillary information transmitter, associated with said
page call-in center, that automatically transmits at least some of
said party identification information to a pager associated with a
paged party.

2. The system as recited in Claim 1 wherein said ancillary
information collector derives said party identification information
from a public telephone network associated with a paging party.

3. The system as recited in Claim 1 wherein said ancillary
information collector prompts a paging party for at least some of
said party identification information.

4. The system as recited in Claim 1 wherein said ancillary

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2 information collector recognizes a voice of a paging party to

3 receive at least some of said party identification information.

5. The system as recited in Claim 1 wherein said party

2 identification information is selected from the group consisting

3 of:

4 caller identification information,

5 name information, and

6 location information.

6. The system as recited in Claim 1 wherein said ancillary

information collector derives said party identification information

from a database associated with said page call-in center.

7. The system as recited in Claim 1 wherein said pager is

selected from the group consisting of:

an alphanumeric pager,

4 a personal digital assistant (PDA), and

5 a cell phone.

8. For use in a paging network, a method of providing ancillary page information, comprising:

deriving party identification information ancillary to a page request received by a page call-in center; and

automatically transmitting at least some of said party identification information to a pager associated with a paged party.

9. The method as recited in Claim 8 wherein said deriving comprises deriving said party identification information from a public telephone network associated with a paging party.

10. The method as recited in Claim 8 wherein said deriving comprises prompting a paging party for at least some of said party identification information.

11. The method as recited in Claim 8 wherein said deriving comprises recognizing a voice of a paging party to receive at least some of said party identification information.

12. The method as recited in Claim 8 wherein said party

2   identification information is selected from the group consisting

3   of:

4   caller identification information,

5   name information, and

6   location information.

       13.   The method as recited in Claim 8 wherein said deriving

2   comprises deriving said party identification information from a

3   database associated with said page call-in center.

       14.   The method as recited in Claim 8 wherein said pager is

    selected from the group consisting of:

         an alphanumeric pager,

4   a personal digital assistant (PDA), and

5   a cell phone.

15.   A paging network infrastructure, comprising:

a plurality of pagers having pageable parties associated therewith;

a page call-in center that selectively communicates with ones of said plurality of pagers;

an ancillary information collector, associated with said page call-in center, that derives party identification information ancillary to a page request received by said page call-in center; and

an ancillary information transmitter, associated with said page call-in center, that automatically transmits at least some of said party identification information to one of said plurality of pagers.

16.   The paging infrastructure as recited in Claim 15 wherein said ancillary information collector derives said party identification information from a public telephone network associated with a paging party.

17.   The paging infrastructure as recited in Claim 15 wherein said ancillary information collector prompts a paging party for at least some of said party identification information.

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18. The paging infrastructure as recited in Claim 15 wherein said ancillary information collector recognizes a voice of a paging party to receive at least some of said party identification information.

19. The paging infrastructure as recited in Claim 15 wherein said party identification information is selected from the group consisting of:

caller identification information,

name information, and

location information.

20. The paging infrastructure as recited in Claim 15 wherein said ancillary information collector derives said party identification information from a database associated with said page call-in center.

21. The paging infrastructure as recited in Claim 15 wherein said pager is selected from the group consisting of:

an alphanumeric pager,

a personal digital assistant (PDA), and

a cell phone.

SYSTEM AND METHOD FOR PROVIDING ANCILLARY PAGE INFORMATION

ABSTRACT OF THE DISCLOSURE

For use in a paging network, a system for, and method of, providing ancillary page information. In one embodiment, the

5 system includes: (1) an ancillary information collector, associated with a page call-in center of the paging network, that derives party identification information ancillary to a page request received by the page call-in center and (2) an ancillary information transmitter, associated with the page call-in center,

10 that automatically transmits at least some of the party identification information to a pager associated with a paged party.

104
PAGING PARTY

105

100

110
PUBLIC TELEPHONE NETWORK

115
PAGE CALL-IN CENTER

120
121
AIC

122

CALLER-ID DECODER

TOUCH-TONE DECODER

AIT

125

123
PAGE DATABASE

130
PAGER NETWORK

135

136
PAGED PARTY

FIGURE 1

START — 201

INITIATE PAGE — 205

Q1 — 210
YES
NO

Q2 — 215
YES
NO

Q3 — 220
YES
NO

ENTER PAGING PARTY NUMBER — 245

DECODE PAGING PARTY NUMBER & QUERY DATABASE — 250

Q4 — 255
YES
NO

ENTER NUMBER REGISTERED TO PAGING PARTY — 230

DECODE ENTERED NUMBER & QUERY DATABASE — 235

ENTER NUMBER REGISTERED TO PAGING PARTY — 265

DECODE ENTERED NUMBER & QUERY DATABASE — 270

SEND CALLERID NUMBER & NAME — 225

SEND CALLERID NUMBER & DATABASE NAME — 240

SEND ENTERED NUMBER & DATABASE NAME — 260

SEND FIRST ENTERED NUMBER & ALTERNATE NAME — 275

END — 280

200
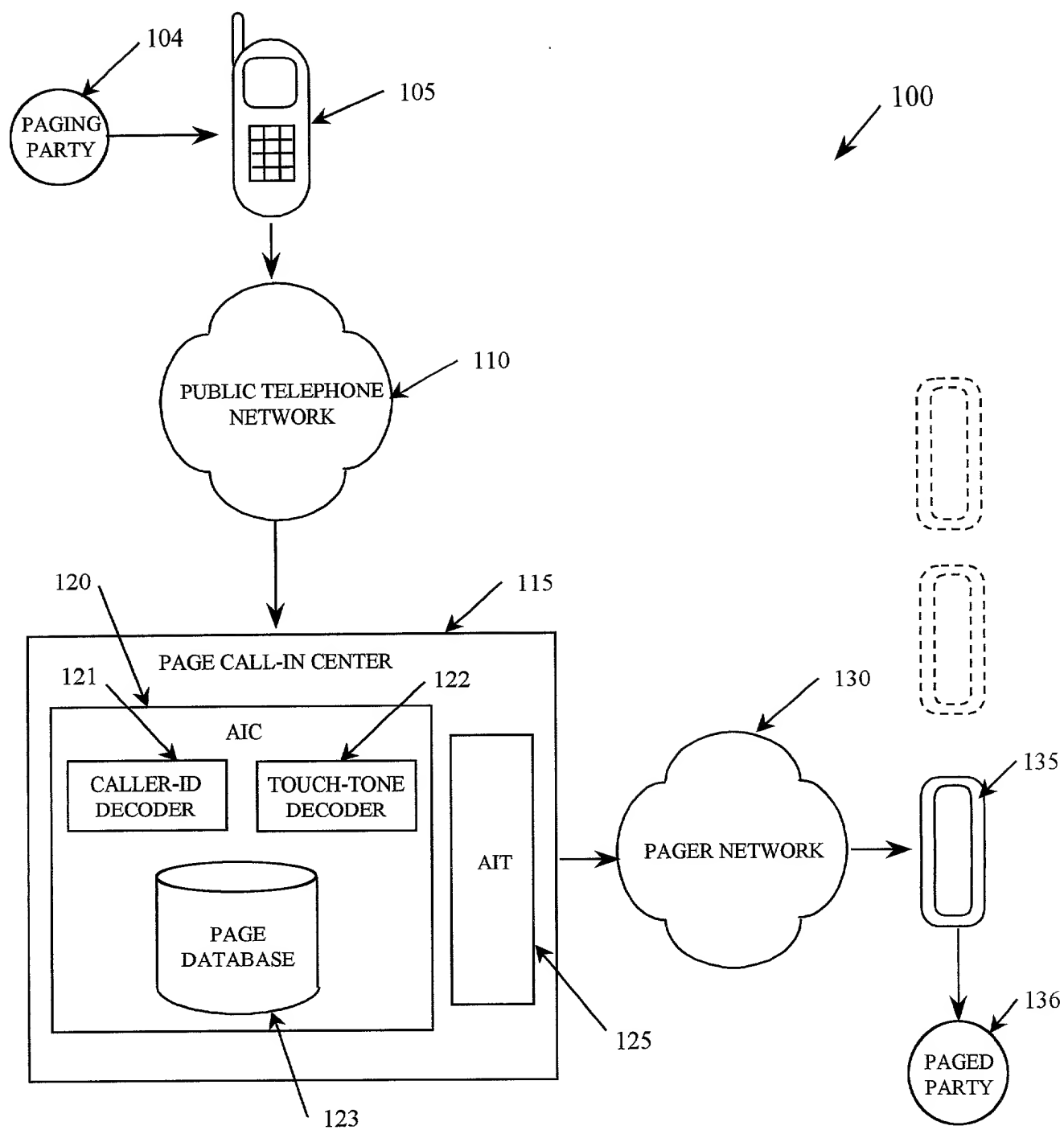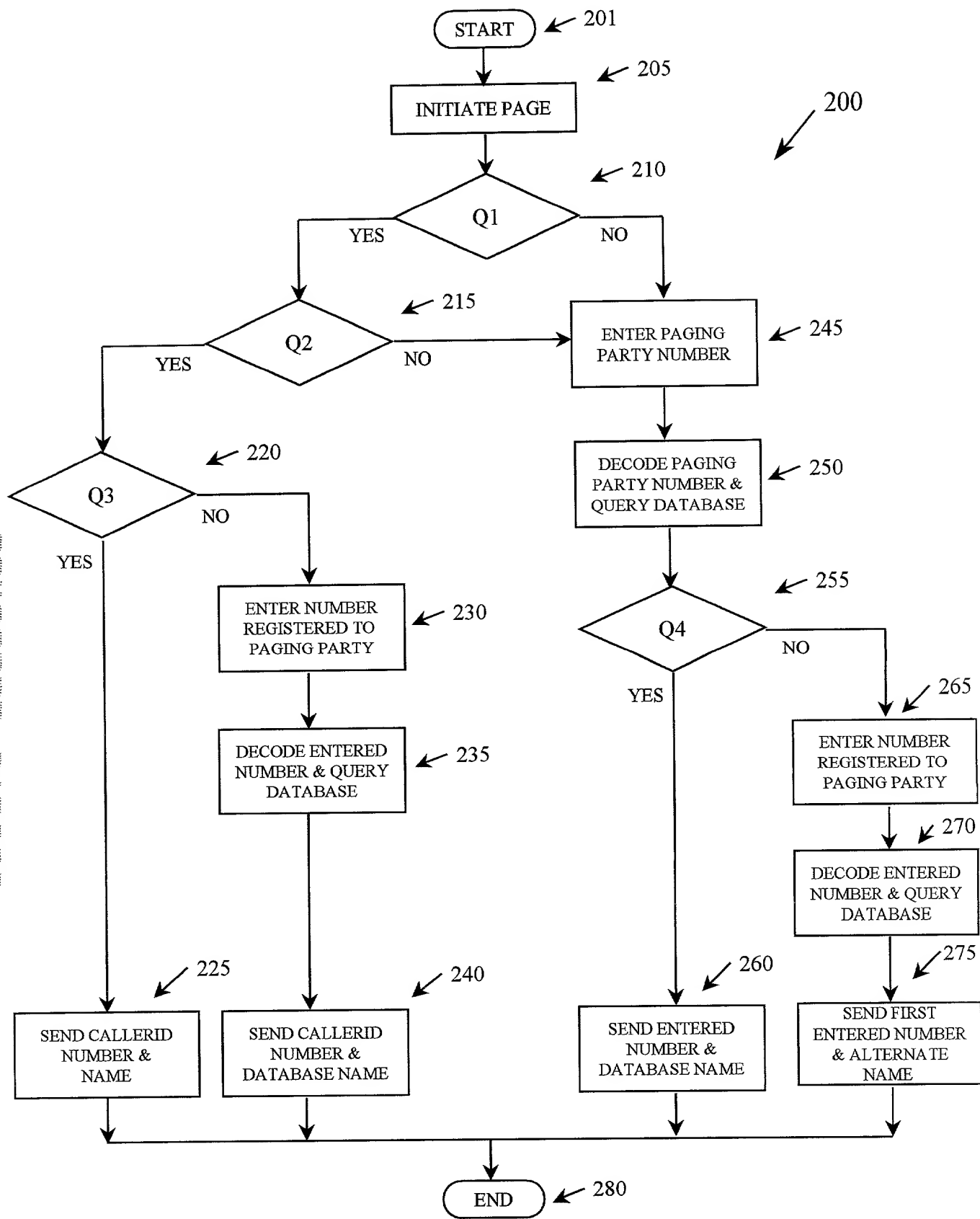
FIGURE 2

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Delcaration and Power of Attorney

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled "SYSTEM AND METHOD FOR PROVIDING ANCILLARY PAGE INFORMATION," the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment, if any, specifically referred to in this oath or declaration.

I acknowledge the duty to disclose to all information known to me which is material to the patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

NUMBER	COUNTRY	DATE FILED	PRIORITY CLAIMED
	None		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

US/PCT Serial Num	Date Filed	Status
None		

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorney(s) with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith:

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I hereby appoint the attorney(s) on ATTACHMENT A as associate attorney(s) in the aforementioned application, with full power solely to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected with the prosecution of said application. No other powers are granted to such associate attorney(s) and such associate attorney(s) are specifically denied any power of substitution or revocation.

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